# IAP6 Rec'd PCT/PTO 04 JUN 2007

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)				. CUSTOMER NO. <b>22,852</b> ATTORNEY'S DOCKET NUMBER				
1		CONCERNING A SUBMISS	09707.0011-00000					
				U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/579,294				
			INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED				
		P2004/017227	November 12, 2004	November 14, 2003				
		INVENTION CULTURE METHOD, THR	EE-DIMENSIONAL CELL CULT	URE METHOD, THREE-DIMENSIONAL				
		· · · · · · · · · · · · · · · · · · ·	ND TISSUE TRANSPLANTATION					
APPLICANT(S) FOR DO/EO/US  1) Ryo SUDO; 2) Kazuo TANISHITA; 3) Mariko IKEDA; 4) Toshihiro MITAKA								
Арр	licant(		s Designated/Elected Office (DO/EO/US) the folk					
1.								
2.	_ ⊠	This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.						
3.		This is an express request to begin na	ational examination procedures (35 U.S.C. 371(f)	). The submission must include items				
١,	_	(5), (6), (9) and (21) indicated below.						
4.		The US has been elected (Article 31).  A copy of the International Application	2 25 filed (35 LLS C 371 (c)(2))					
5.			only if not communicated by the International E	Rureau\				
ļ			•	sureau).				
l		_	by the International Bureau.	a Office (BOULE)				
			lication was filed with the United States Receivin					
6.		_	e International Application as filed (35 U.S.C. 371	(C)(2)).				
		a. is attached hereto.						
	_	b. has been previously submitted under 35 U.S.C. 154(d)(4).						
7.	Ш	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3)).						
		<u> </u>	red only if not communicated by the International	Bureau).				
		b. have been communicated by the International Bureau.						
l		c. have not been made; however, the time limit for making such amendments has NOT expired.						
l		d. have not been made and v	will not be made.					
8.		An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).						
9.		An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).						
10.		An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).						
Iten	ns 11 1	to 20 below concern document(s) or	information included:					
11.		Information Disclosure Statement under 37 CFR 1.97 and 1.98						
12.		An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.						
13.		A preliminary amendment.						
14.		An Application Data Sheet under 37 CFR 1.76.						
15.		A Substitute specification.						
16.		A power of attorney and/or change of address letter.						
17.	$\boxtimes$	A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.						
18.		A second copy of the published International Application under 35 U.S.C. 154 (d)(4).						
19.		A second copy of the English language translation of the international application 35 U.S.C. 154 (d)(4).						
20.		Other items or information: Petition for Extension of Time (One Month)						
		a.	ornational Publication No. WO 2005/047406	A 1				
		b. Sequence Listing in hardo	ernational Publication No. WO 2005/047496 . copy form.	AL.				
		c. 🛛 Copy of Notification of Mis						
1		d. Sequence Listing Stateme	ent.					

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)			INTERNATIONAL APPLICATION NO.			ATTORNEY'S DOCKET NUMBER	
10/579,294			PCT/JP2004/017227			09707.0011-00000	
	The following tees ha	ave been submitted:				CALCULATIONS	PTO Use Only
21. 🛚	BASIC NATIONAL F	EE (37 CFR 1.492(a)):		\$300.00		\$	
22 Examination fee (37CFR 1.492(c))							
If the Written opinion prepared by ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)							
			21 Afficie 33(1)-(4)			\$ *	
23. Search fee (37 CFR 1.492(b))  If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)							
			1, 22 and 23 =			\$	
Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)).  The fee is \$250 for each additional 50 sheets of paper or fraction thereof.							
	Total Sheets	Extra Sheets	Number of each additional thereof (round up to a who		Rate		
					x \$250.00	\$	
Extension	n of Time Fee (One Mont					\$ 120.00	
<b>T</b>	CLAIMS	NUMBER FILED	NUMBER EXTRA				
Total Cla				x \$50.00		\$	
	dent Claims LE DEPENDENT CLAIM(	S) (if applicable)	x \$200.00 +\$360.00			\$	
WOLIN	EL DE ENDENT GENING	(a) (ii application)	TOTA			\$ 120.00	<u></u>
TOTAL OF ABOVE CALCULATIONS =  Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½.						\$ - 60.00	
<u> </u>	our diame of all of all of			S	UBTOTAL =	\$ 60.00	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest priority date (37 CFR + 492(i)).						\$	
				TOTAL NATI	ONAL FEE =	\$	
Fee for recording the enclosed assignment (37 CFR 1.21 (h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property.						\$	
				r	OTAL FEE =	\$ 60.00	
						Amount to be refunded:	S
. —	A sheet in the second	4.0	eve toos is analysis			charged:	\$
a. [_] b. ⊠		sit Account No. 06-0916 in the	nove fees is enclosed.  The amount of \$60.00 to cover	the above fee.			
c. 🖾							
	No. 06-0916. A duplicate copy of this sheet is enclosed.						
d. Tees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.							
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.							
SEND ALL CORRESPONDENCE TO:							
901 New	innegan, Henderson, Farabow, Garrett & Dunner, L.L.P.  101 New York Avenue, N.W. Vashington, DC 20001-4413  Timotty B. Donaldson, Reg. No. 43,592						
DATED.	June 4, 2007		NAME/RE	GISTRATION NUMB	EĦ		

			THE PERSONATED OF LOSE OF LOSE	CUSTOMER NO. 22 852				
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371				CUSTOMER NO. 22,852 ATTORNEY'S DOCKET NUMBER 09707.0011-00000				
				U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>10/579,294</b>				
INTERNATIONAL APPLICATION NO. INTERNATIONAL FILING DATE PCT/JP2004/017227 November 12, 2004			INTERNATIONAL FILING DATE November 12, 2004	November 14, 2003				
TITLI	E OF I	INVENTION		THE MENT OF THE PROPERTY OF A				
CE	CELL CULTURE METHOD, THREE-DIMENSIONAL CELL CULTURE METHOD, THREE-DIMENSIONAL							
	TISSUE, ARTIFICIAL ORGAN AND TISSUE TRANSPLANTATION METHOD  APPLICANT(S) FOR DO/EO/US							
	1) Ryo SUDO; 2) Kazuo TANISHITA; 3) Mariko IKEDA; 4) Toshihiro MITAKA							
Appli	cant(s	herewith submits to the United States	s Designated/Elected Office (DO/EO/US) the fol	lowing items and other information:				
1.		This is a FIRST submission of items of	oncerning a filing under 35 U.S.C 371.					
2.	Ø	This is a SECOND or SUBSEQUENT	submission of items concerning a submission to	under 35 U.S.C. 371.				
3.		This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.						
4.		The US has been elected (Article 31).						
5.		A copy of the International Application						
		_	ed only if not communicated by the International	Bureau).				
		• •	by the International Bureau.	C// (D0//D)				
		<del></del>	lication was filed with the United States Receivi					
6.		An English language translation of the	e International Application as filed (35 U.S.C. 37	1(c)(2)).				
		a. is attached hereto.						
			nitted under 35 U.S.C. 154(d)(4).					
7.		Amendments to the claims of the Inter	rnational Application under PCT Article 19 (35 L	J.S.C. 371 (c)(3)).				
		a. are attached hereto (requi	red only if not communicated by the Internation	al Bureau).				
		b. have been communicated	by the International Bureau.					
		c. have not been made; however, the time limit for making such amendments has NOT expired.						
		d. have not been made and	will not be made.					
8.		An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).						
9.		An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).						
10.		An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).						
Item	s 11 t	to 20 below concern document(s) or	information included:					
11.		Information Disclosure Statement und	der 37 CFR 1.97 and 1.98					
12.		An assignment document for recording	g. A separate cover sheet in compliance with 3	7 CFR 3.28 and 3.31 is included.				
13.		A preliminary amendment.						
14.		An Application Data Sheet under 37 CFR 1.76.						
15.		A Substitute specification.						
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19		A second copy of the English language translation of the international application 35 U.S.C. 154 (d)(4).						
20.	⊠	Other items or information: Petition for Extension of Time (One Month)						
		a.   Copy of cover page of Int	ternational Publication No. WO 2005/047496	5.4.1				
		b. Sequence Listing in hard						
l		c. 🛛 Copy of Notification of Mi	• •					
ı		d. Sequence Listing Statem	ent.					



#### United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

U.S. APPLICATION NUMBER NO. FIRST NAMED APPLICANT ATTY. DOCKET NO. 10/579,294 09707.0011

Ryo Sudo

INTERNATIONAL APPLICATION NO.

PCT/JP04/17227

I.A. FILING DATE

PRIORITY DATE

11/12/2004

11/14/2003

22852

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER

901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413

MAR-0 5 2007

**CONFIRMATION NO. 6583** 371 FORMALITIES LETTER 

\*OC000000022719016\*

Date Mailed: 03/02/2007

FINNEGAN, HENDERSON, FARABOW, GARRETT AND DUNNER, LLP

### NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Indication of Small Entity Status
- Copy of the International Application filed on 05/15/2006
- English Translation of the IA filed on 05/15/2006
- Copy of the International Search Report filed on 05/15/2006
- Preliminary Amendments filed on 05/15/2006
- Information Disclosure Statements filed on 05/15/2006
- Biochemical Sequence Diskette filed on 05/15/2006
- U.S. Basic National Fees filed on 05/15/2006
- Priority Documents filed on 05/15/2006
- Specification filed on 05/15/2006
- Claims filed on 05/15/2006
- Abstracts filed on 05/15/2006
- Drawings filed on 05/15/2006

The applicant needs to satisfy supplemental fees problems indicated below.

The following items MUST be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.492(h) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.

#### SUMMARY OF FEES DUE:

Total additional fees required for this application is \$65 for a Small Entity:

- \$65 Surcharge.
  - A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of
    the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as
    indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a
    substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content
    of the sequence listing information recorded in computer readable form is identical to the written (on paper
    or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR
    1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web. <a href="https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html">https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html</a>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

TAMALA D HOLLAND

Telephone: (703) 308-9140 EXT 209

PART 1 - ATTORNEY/APPLICANT COPY

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U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/579.294	PCT/JP04/17227	09707.0011

## STIC Biotechnology Systems Branch

# RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10579394

Source: 15606

Date Processed by STIC: 5-23-06

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,

2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 4.4.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS: <a href="http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm">http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm</a>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<a href="http://www.uspto.gov/ebc/efs/downloads/documents.htm">http://www.uspto.gov/ebc/efs/downloads/documents.htm</a>, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
   U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street,
   Alexandria, VA 22314

Revised 01/10/06



**IFWP** 

RAW SEQUENCE LISTING

DATE: 05/23/2006

PATENT APPLICATION: US/10/579,294

TIME: 14:29:58

Input Set : A:\PTO.KD.txt

Output Set: N:\CRF4\05232006\J579294.raw

3 <110> APPLICANT: KEIO UNIVERSITY

5 <120> TITLE OF INVENTION: Methods of cell culture, cell 3D culture, and tissue

transplantation, and

3D tissue 6

and artificial organ made thereby

9 <130> FILE REFERENCE: PCT835

C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/579,294

C--> 11 <141> CURRENT FILING DATE: 2006-05-15

11 <150> PRIOR APPLICATION NUMBER: JP 2003/385677

12 <151> PRIOR FILING DATE: 2003-11-14

14 <160> NUMBER OF SEQ ID NOS: 12

16 <170> SOFTWARE: PatentIn version 3.1

Does Not Comply Corrected Diskette Needed

#### ERRORED SEQUENCES

156 <210> SEQ ID NO: 12 157 <211> LENGTH: 20 158 <212> TYPE: DNA

159 <213> ORGANISM: Artificial Sequence

161 <220> FEATURE:

Invalid 162 <223 > OTHER INFORMATION: (P12) Response

164 <400> SEQUENCE: 12 165 tccaccaccc tgttqctgta

B--> 170 (continued from previous page)

B--> 171 (continued on next page)

B--> 174 (continued from previous page)

B--> 175 (continued on next page)

TPIS delete

See item#11
on erron
summary
sheeti

0/579,29\$ PIS explain Source of genetic material <210> <211> <212> Artificial Sequence <220> p15 delete Inventor: Sudo, Ryo Inventor: Tanishita, Kazuo Inventor: Ikeda, Mariko Inventor: Mitaka, Toshihiro <220> hilaur Response <400> 1 aaggcacccc gattactccg e above erron is seen Globally Guranshart The sequence, Seeitem#11 on error Summary sheet.

RAW SEQUENCE LISTING BRROR SUMMARY PATENT APPLICATION: US/10/579,294

DATE: 05/23/2006 TIME: 14:29:59

Input Set : A:\PTO.KD.txt

Output Set: N:\CRF4\05232006\J579294.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seg#:1; Line(s) 5

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/579,294

DATE: 05/23/2006 TIME: 14:29:59

Input Set : A:\PTO.KD.txt

Output Set: N:\CRF4\05232006\J579294.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date

Lr:170 M:334 B: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:4

£:171 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:12

L:171 M:334 E: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:4

L:174 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:12

L:174 M:334 B: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:4

L:175 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:12

L:175 M:334 B: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:4